



DEPARTMENT OF LABOR

Mine Safety and Health Administration

Petition for Modification of Application of Existing Mandatory Safety Standards

AGENCY: Mine Safety and Health Administration, Labor.

ACTION: Notice.

SUMMARY: This notice is a summary of a petition for modification submitted to the Mine Safety and Health Administration (MSHA) by the party listed below.

DATES: All comments on the petition must be received by MSHA's Office of Standards, Regulations, and Variances on or before [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may submit your comments including the docket number of the petition by any of the following methods:

1. Electronic Mail: zzMSHA-comments@dol.gov. Include the docket number of the petition in the subject line of the message.
2. Facsimile: 202-693-9441.
3. Regular Mail or Hand Delivery: Regular Mail or Hand Delivery: MSHA, Office of Standards, Regulations, and Variances, 201 12th Street South, Suite 4E401, Arlington, Virginia 22202-5452, Attention: Jessica D. Senk, Director, Office of Standards, Regulations, and Variances. MSHA will consider only comments postmarked by the U.S. Postal Service or proof of delivery from another delivery service such as UPS or Federal Express on or before the deadline for comments. Persons delivering documents are required to check in at the receptionist's desk in Suite 4E401. Individuals may inspect copies of the petition and comments during normal business hours at the address listed above. Before visiting MSHA in person, call 202-693-9455 to make an appointment, in keeping with the Department of Labor's COVID-19 policy. Special health precautions may be required.

FOR FURTHER INFORMATION CONTACT: Jessica D. Senk, Office of Standards, Regulations, and Variances at 202-693-9440 (voice), Senk.Jessica@dol.gov (email), or 202-693-9441 (facsimile). [These are not toll-free numbers.]

SUPPLEMENTARY INFORMATION: Section 101(c) of the Federal Mine Safety and Health Act of 1977 and Title 30 of the Code of Federal Regulations (CFR) part 44 govern the application, processing, and disposition of petitions for modification.

I. Background

Section 101(c) of the Federal Mine Safety and Health Act of 1977 (Mine Act) allows the mine operator or representative of miners to file a petition to modify the application of any mandatory safety standard to a coal or other mine if the Secretary of Labor determines that:

1. An alternative method of achieving the result of such standard exists which will at all times guarantee no less than the same measure of protection afforded the miners of such mine by such standard; or
2. The application of such standard to such mine will result in a diminution of safety to the miners in such mine.

In addition, sections 44.10 and 44.11 of 30 CFR establish the requirements for filing petitions for modification.

II. Petition for Modification

Docket Number: M-2021-030-C

Petitioner: Rosebud Mining Company, 301 Market Street, Kittanning, Pennsylvania (ZIP 16201)

Mine: Heilwood Mine, MSHA ID No. 36-09407, located in Indiana County, Pennsylvania

Regulation Affected: 30 CFR 75.1700 (Oil and gas wells).

Modification Request: The petitioner requests a modification of the existing standard, 30 CFR 75.1700, as it relates to oil and gas wells at the mine. Specifically, the petitioner is proposing procedures for: cleaning out and preparing oil and gas wells prior to plugging or re-plugging; procedures for plugging or re-plugging oil or gas wells to the surface; procedures for plugging or

re-plugging oil or gas wells for use as degasification boreholes; alternative procedures for preparing and plugging or re-plugging oil or gas wells; and procedures after approval has been granted to mine through a plugged or re-plugged well.

The petitioner states that:

- (a) The Heilwood Mine is opened into the Lower Kittanning Coal seam and accesses the Brookville coal seam via an inter mine slope. Coal is produced in one underground section using a continuous mining machine and a continuous haulage system. The mine operates one production shift per day, 5 to 6 days per week, producing an average of 800 tons of raw coal per day. The mine employs 20 persons underground and 5 on the surface.
- (b) The Heilwood Mine uses a room and pillar method of mining. A continuous miner with attached haulage develops main entries. After the mains are established butts, rooms, and/or panels are developed off of the mains. The length of the rooms and/or panels can typically extend a distance of 600 feet to over 6,000 feet, depending on permit boundaries, projections, and conditions.
- (c) The Heilwood Mine permit contains oil or gas wells that have been depleted of oil or gas production, producing wells, and oil or gas wells that have not produced oil or gas and may have been plugged. These wells would alter the mining projections for the life of the mine and not allow for the most efficient use of air available to the mine if the barrier established by 30 CFR 75.1700 were to remain in place.

The petitioner proposes the following alternative method:

- (a) District Manager's approval is required.
 - (1) The type of oil or gas well that will be considered under this petition includes wells that have been depleted of oil or gas production, have not produced oil or gas and may have been plugged, and active wells. No Marcellus and Utica wells are contained within the Heilwood Mine Permit and subject to this modification.

(2) A safety barrier of 300 feet in diameter (150 feet between any mined area and a well) shall be maintained around all oil and gas wells (to include: all active, inactive, abandoned, shut-in, and previously plugged wells; water injection wells; and carbon dioxide sequestration wells) until approval to proceed with mining has been obtained from the District Manager. Wells that were drilled into potential oil or gas producing formations that did not produce commercial quantities of either gas or oil (exploratory wells, wildcat wells, or dry holes) are classified as oil or gas wells by MSHA.

(3) Prior to mining within the safety barrier around any well that the mine plans to intersect, the mine operator shall provide to the District Manager a sworn affidavit or declaration executed by a company official stating that all mandatory procedures for cleaning out, preparing, and plugging each gas or oil well have been completed as described by the terms and conditions of the Decision and Order.

(4) The affidavit or declaration must be accompanied by all logs described in (b)(8) and (b)(9) below and any other records which the District Manager may request. The District Manager will review the affidavit or declaration, the logs, and any other records, may inspect the well itself, and will then determine if the operator has complied with the procedures for cleaning out, preparing, and plugging each well as described by the terms and conditions of the Decision and Order. If the District Manager determines that the procedures have been complied with, he will provide his approval, and the mine operator may then mine within the safety barrier of the well, subject to the terms of the Decision and Order. If well intersection is not planned, the mine operator may request a permit to reduce the 300 foot diameter of the safety barrier that does not include intersection of the well. The District Manager may require documentation that help verify the accuracy of the location of the well in respect to the mine maps and mining projections. This information may include survey closure data, down-hole well deviation logs, historical well intersection location data, and any additional data required by the District Manager.

If the District Manager determines that the proposed barrier reduction is reasonable, he will provide his approval, and the mine operator may then mine within the safety barrier of the well.

(5) The terms and conditions of the Decision and Order apply to all types of underground coal mining.

(b) The petitioner proposes to use the following mandatory procedures for cleaning out and preparing vertical oil and gas wells prior to plugging or re-plugging.

(1) The mine operator shall test for gas emissions inside the hole. The District Manager shall be contacted if gas is being produced.

(2) A diligent effort shall be made to clean the well to the original total depth. The mine operator shall contact the District Manager prior to stopping the operation to pull casing or clean out the total depth of the well.

(3) If this depth cannot be reached, and the total depth of the well is less than 4,000 feet, the operator shall completely clean out the well from the surface to at least 200 feet below the base of the lowest mineable coal seam, unless the District Manager requires cleaning to a greater depth.

(4) The operator shall provide the District Manager with all information it possesses concerning the geological nature of the strata and the pressure of the well.

(5) If the total depth of the well is 4,000 feet or greater, the operator shall completely clean out the well from the surface to at least 400 feet below the base of the lowest mineable coal seam. The operator shall remove all material from the entire diameter of the well, wall to wall.

(6) If the total depth of the well is unknown and there is no historical information, the mine operator must contact the District Manager before proceeding.

(7) The operator shall prepare down-hole logs for each well. Logs shall consist of a caliper survey, a gamma log, a bond log, and a deviation survey for determining the top,

bottom, and thickness of all coal seams down to the lowest minable coal seam, potential hydrocarbon producing strata, and the location of any existing bridge plug. A journal shall be maintained describing the depth of each material encountered; the nature of each material encountered; bit size and type used to drill each portion of the hole; length and type of each material used to plug the well; length of casing(s) removed, perforated, ripped, or left in place; any sections where casing was cut or milled; and other information concerning cleaning and sealing the well. Invoices, work-orders, and other records relating to all work on the well shall be maintained as part of this journal and provided to MSHA upon request.

(8) When cleaning out the well as provided for in (b) above, the operator shall make a diligent effort to remove all of the casing in the well. After the well is completely cleaned out and all the casing removed, the well should be plugged to the total depth by pumping expanding cement slurry and pressurizing to at least 200 pounds per square inch (psi). If the casing cannot be removed, it must be cut, milled, perforated, or ripped at all mineable coal seam levels to facilitate the removal of any remaining casing in the coal seam by the mining equipment. Any remaining casing shall be perforated or ripped to permit the injection of cement into voids within and around the well.

(9) All casing remaining at mineable coal seam levels shall be perforated or ripped at least every 5 feet from 10 feet below the coal seam to 10 feet above the coal seam. Perforations or rips are required at least every 50 feet from 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam up to 100 feet above the uppermost mineable coal seam. The mine operator must take appropriate steps to ensure that the annulus between the casing and the well walls are filled with expanding (minimum 0.5% expansion upon setting) cement and contain no voids.

(10) If it is not possible to remove all of the casing, the operator shall notify the District Manager before any other work is performed. If the well cannot be cleaned out or the casing removed, the operator shall prepare the well as described from the surface to at least 200 feet below the base of the lowest mineable coal seam for wells less than 4,000 feet in depth and 400 feet below the lowest mineable coal seam for wells 4,000 feet or greater, unless the District Manager requires cleaning out and removal of casing to a greater depth.

(11) If the operator using a casing bond log can demonstrate to the satisfaction of the District Manager that all annuli in the well are already adequately sealed with cement, the operator will not be required to perforate or rip the casing for that particular well. When multiple casing and tubing strings are present in the coal horizon(s), any remaining casing shall be ripped or perforated and filled with expanding cement as indicated above. An acceptable casing bond log for each casing and tubing string is needed if used in lieu of ripping or perforating multiple strings.

(12) If the District Manager concludes that the completely cleaned-out well is emitting excessive amounts of gas, the operator must place a mechanical bridge plug in the well. It must be placed in a competent stratum at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam, but above the top of the uppermost hydrocarbon-producing stratum, unless the District Manager requires a greater distance. The operator shall provide the District Manager with all information it possesses concerning the geological nature of the strata and the pressure of the well. If it is not possible to set a mechanical bridge plug, an appropriately sized packer may be used. The mine operator shall document what has been done to "kill the well" and plug the carbon producing strata.

(12) If the upper-most hydrocarbon-producing stratum is within 300 feet of the base of the lowest minable coal seam, the operator shall properly place mechanical bridge plugs

as described in (b)(11) above to isolate the hydrocarbon-producing stratum from the expanding cement plug. The operator shall place a minimum of 200 feet (400 feet if the total well depth is 4,000 feet or greater) of expanding cement below the lowest mineable coal seam, unless the District Manager requires a greater distance.

(c) The petitioner proposes to use the following mandatory procedures for plugging or re-plugging oil or gas wells to the surface. After completely cleaning out the well as specified in (b) above:

(1) The operator shall pump expanding cement slurry down the well to form a plug which runs from at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam (or lower if required by the District Manager) to the surface. The expanding cement will be placed in the well under a pressure of at least 200 psi. Portland cement or a lightweight cement mixture may be used to fill the area from 100 feet above the top of the uppermost mineable coal seam (or higher if required by the District Manager) to the surface.

(2) The operator shall embed steel turnings or other small magnetic particles in the top of the cement near the surface to serve as a permanent magnetic monument of the well. In the alternative, a 4-inch or larger diameter casing, set in cement, shall extend at least 36 inches above the ground level with the American Petroleum Institute (API) well number engraved or welded on the casing. When the hole cannot be marked with a physical monument (e.g. prime farmland), high-resolution GPS coordinates (one-half meter resolution) are required.

(d) The petitioner proposes to use the following mandatory procedures for plugging or re-plugging oil and gas wells for use as degasification wells. After completely cleaning out the well as specified in (b) above, the following procedures shall be utilized:

(1) The operator shall set a cement plug in the well by pumping an expanding cement slurry down the tubing to provide at least 200 feet (400 feet if the total well depth is

4,000 feet or greater) of expanding cement below the lowest mineable coal seam, unless the District Manager requires a greater depth.

(i) The expanding cement will be placed in the well under a pressure of at least 200 psi.

(ii) The top of the expanding cement shall extend at least 50 feet above the top of the coal seam being mined, unless the District Manager requires a greater distance.

(2) The operator shall securely grout into the bedrock of the upper portion of the degasification well a suitable casing in order to protect it. The remainder of this well may be cased or uncased.

(3) The operator shall fit the top of the degasification casing with a wellhead equipped as required by the District Manager in the approved Ventilation Plan. Such equipment may include check valves, shut-in valves, sampling ports, flame arrestor equipment, and security fencing.

(4) Operation of the degasification well shall be addressed in the approved Ventilation Plan. This may include periodic tests of methane levels and limits on the minimum methane concentrations that may be extracted.

(5) After the area of the coal mine that is degassed by a well is sealed or the coal mine is abandoned, the operator must plug all degasification wells using the following procedures:

(i) The operator shall insert a tube to the bottom of the well or, if not possible, to within 100 feet above the coal seam being mined. Any blockage must be removed to ensure that the tube can be inserted to this depth.

(ii) The operator shall set a cement plug in the well by pumping Portland cement or lightweight cement mixture down the tubing until the well is drilled to the surface.

(iii) The operator shall embed steel turnings or other small magnetic particles in the top of the cement near the surface to serve as a permanent magnetic monument of the well. Alternatively, a 4-inch or larger casing, set in cement, shall extend at least 36 inches above the ground level with the API well number engraved or welded on the casing.

(e) The petitioner proposes to use the following mandatory alternative procedures for preparing and plugging or re-plugging oil or gas wells. The following provisions apply to all wells which the operator determines, and with which the MSHA District Manager agrees, cannot be completely cleaned out due to damage to the well caused by subsidence, caving, or other factors.

(1) The operator shall drill a hole adjacent and parallel to the well, to a depth of at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the lowest mineable coal seam, unless the District Manager requires a greater depth.

(2) The operator shall use a geophysical sensing device to locate any casing which may remain in the well.

(3) If the well contains casing(s), the operator shall drill into the well from the parallel hole. From 10 feet below the coal seam to 10 feet above the coal seam, the operator shall perforate or rip all casings at least every 5 feet. Beyond this distance, the operator shall perforate or rip at least every 50 feet from at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam up to 100 feet above the seam being mined, unless the District Manager requires a greater distance. The operator shall fill the annulus between the casings and the well wall with expanding (minimum 0.5% expansion upon setting) cement and shall ensure that these areas contain no voids. If the operator, using a casing bond log, can demonstrate to the satisfaction of the District Manager that the annulus of the well is adequately sealed with cement, then the operator will not be required to perforate or rip the casing for that particular well or

fill these areas with cement. When multiple casing and tubing strings are present in the coal horizon(s), any remaining casing shall be ripped or perforated and filled with expanding cement as indicated above. An acceptable casing bond log for each casing and tubing string is needed if used in lieu of ripping or perforating multiple strings.

(4) Where the operator determines, and the District Manager agrees, that there is insufficient casing in the well to allow the method outlined in (e)(3) above to be used, the operator shall use a horizontal hydraulic fracturing technique to intercept the original well. From at least 200 feet (400 feet if the total well depth is 4,000 feet or greater) below the base of the lowest mineable coal seam to a point at least 50 feet above the seam being mined, the operator shall fracture in at least six places at intervals to be agreed upon by the operator and the District Manager. The operator shall then pump expanding cement into the fractured well to fill all intercepted voids.

(5) The operator shall prepare down-hole logs for each well. Logs shall consist of a caliper survey, a gamma log, a bond log, and a deviation survey for determining the top, bottom, and thickness of all coal seams down to the lowest minable coal seam, potential hydrocarbon producing strata, and the location of any existing bridge plug. The operator may obtain the logs from the adjacent hole rather than the well if the condition of the well makes it impractical to insert the equipment necessary to obtain the log.

(6) A journal shall be maintained describing the depth of each material encountered; the nature of each material encountered; bit size and type used to drill each portion of the hole; length and type of each material used to plug the well; length of casing(s) removed, perforated, ripped, or left in place; any sections where casing was cut or milled; and other pertinent information concerning sealing the well. Invoices, work orders, and other records relating to all work on the well shall be maintained as part of this journal and provided to MSHA upon request.

(7) After the operator has plugged the well as described in (e)(3) and/or (e)(4) above, the operator shall plug the adjacent hole, from the bottom to the surface, with Portland cement or a lightweight cement mixture. The operator shall embed steel turnings or other small magnetic particles in the top of the cement near the surface to serve as a permanent magnetic monument of the well. Alternatively, a 4-inch or larger casing, set in cement, shall extend at least 36 inches above the ground level. A combination of the methods outlined in (e)(3) and (e)(4) above may have to be used in a single well, depending upon the conditions of the hole and the presence of casings. The operator and the District Manager shall discuss the nature of each hole. The District Manager may require that more than one method be utilized. The mine operator may submit an alternative plan to the District Manager for approval to use different methods to address wells that cannot be completely cleaned out. The District Manager may require additional documentation and certification by a registered petroleum engineer to support the proposed alternative methods.

(f) The petitioner proposes to use the following mandatory when mining within a 100-foot diameter barrier around a well.

(1) A representative of the operator, a representative of the miners, the appropriate State agency, or the MSHA District Manager may request that a conference be conducted prior to intersecting any plugged or re-plugged well. Upon receipt of any such request, the District Manager shall schedule such a conference. The party requesting the conference shall notify all other parties listed above within a reasonable time prior to the conference to provide opportunity for participation. The purpose of the conference shall be to review, evaluate, and accommodate any abnormal or unusual circumstance related to the condition of the well or surrounding strata when such conditions are encountered.

(2) The operator shall intersect a well on a shift approved by the District Manager. The operator shall notify the District Manager and the miners' representative in sufficient time

prior to intersecting a well in order to provide an opportunity to have representatives present.

(3) When using continuous mining methods, the operator shall install drilage sights at the last open crosscut near the place to be mined to ensure intersection of the well. The drilage sites shall not be more than 50 feet from the well.

(4) The operator shall ensure that fire-fighting equipment including fire extinguishers, rock dust, and sufficient fire hose to reach the working face area of the well intersection (when either the conventional or continuous mining method is used) is available and operable during all well intersections. The fire hose shall be located in the last open crosscut of the entry or room. The operator shall maintain the water line to the belt conveyor tailpiece along with a sufficient amount of fire hose to reach the farthest point of penetration on the section.

(5) The operator shall ensure that sufficient supplies of roof support and ventilation materials are available and located at the last open crosscut. In addition, emergency plugs and suitable sealing materials shall be available in the immediate area of the well intersection.

(6) On the shift prior to intersecting the well, the operator shall service all equipment and check it for permissibility. Water sprays, water pressures, and water flow rates used for dust and spark suppression shall be examined and any deficiencies corrected.

(7) The operator shall calibrate the methane monitor(s) on the longwall, continuous mining machine, or cutting machine and loading machine on the shift prior to intersecting the well.

(8) When mining is in progress, the operator shall perform tests for methane with a handheld methane detector at least every 10 minutes from the time that mining with the continuous mining machine is within 30 feet of the well until the well is intersected.

During the actual cutting process, no individual shall be allowed on the return side until

the well intersection has been completed and the area has been examined and declared safe. The operator's most current approved Ventilation Plan will be followed at all times unless the District Manager deems a greater air velocity for the intersect is necessary.

(9) When using continuous or conventional mining methods, the working place shall be free from accumulations of coal dust and coal spillages, and rock dust shall be placed on the roof, rib, and floor to within 20 feet of the face when intersecting the well. When the well is intersected, the operator shall deenergize all equipment, and thoroughly examine and determine the area to be safe before permitting mining to resume.

(10) After a well has been intersected and the working place determined to be safe, mining shall continue in by the well a sufficient distance to permit adequate ventilation around the area of the well.

(11) If the casing is cut or milled at the coal seam level, the use of torches should not be necessary. However, in rare instances, torches may be used for inadequately or inaccurately cut or milled casings. No open flame shall be permitted in the area until adequate ventilation has been established around the well bore and methane levels of less than 1.0% are present in all areas that will be exposed to flames and sparks from the torch. The operator shall apply a thick layer of rock dust to the roof, face, floor, ribs, and any exposed coal within 20 feet of the casing prior to the use of torches.

(12) Non-sparking (brass) tools will be located on the working section and will be used exclusively to expose and examine cased wells.

(13) No person shall be permitted in the area of the well intersection except those actually engaged in the operation.

(14) The operator shall alert all personnel in the mine to the planned intersection of the well prior to their going underground if the planned intersection is to occur during their shift. This warning shall be repeated for all shifts until the well has been mined through.

(15) The well intersection shall be under the direct supervision of a certified individual. Instructions concerning the well intersection shall be issued only by the certified individual in charge.

(16) If the mine operator cannot find the well in the middle of the panel or room and misses the anticipated intersection, mining shall cease and the District Manager shall be notified.

(17) The provisions of the Decision and Order do not impair the authority of representatives of MSHA to interrupt or halt the well intersection and issue a withdrawal order when they deem it necessary for the safety of the miners. MSHA may order an interruption or cessation of the well intersection and/or a withdrawal of personnel by issuing either a verbal or written order to that effect to a representative of the operator. Operations in the affected area of the mine may not resume until a representative of MSHA permits resumption. The mine operator and miners shall comply with verbal or written MSHA orders immediately. All verbal orders shall be committed to writing within a reasonable time as conditions permit.

(18) A copy of the Decision and Order shall be maintained at the mine and be available to the miners.

(19) If the well is not plugged to the total depth of all minable coal seams identified in the core hole logs, any coal seams beneath the lowest plug will remain subject to the barrier requirements of 30 CFR 75.1700 should those coal seams be developed in the future.

(20) All necessary safety precautions and safe practices according to industry standards, required by MSHA regulations and State regulatory agencies having jurisdiction over the plugging site will be followed to provide the upmost protection to the miners involved in the process.

(21) All miners involved in the plugging or re-plugging operations will be trained on the contents of the Decision and Order prior to starting the process, and a copy of the

Decision and Order will be posted at the well site until the plugging or re-plugging has been completed.

(22) Mechanical bridge plugs should incorporate the best available technologies that are either required or recognized by the State regulatory agency and/or oil and gas industry.

(23) Within 30 days after the Decision and Order becomes final, the operator shall submit proposed revisions for its approved 30 CFR part 48 training plan to the District Manager.

These proposed revisions shall include initial and refresher training on compliance with the terms and conditions stated in the Decision and Order. The operator shall provide all miners involved in well intersection with training on the requirements of the Decision and Order prior to mining within 150 feet of the next well intended to be mined through.

(24) The responsible person required under 30 CFR 75.1501 Emergency Evacuations is responsible for well intersection emergencies. The well intersection procedures should be reviewed by the responsible person prior to any planned intersection.

(25) Within 30 days after the Decision and Order becomes final, the operator shall submit proposed revisions for its approved mine emergency evacuation and firefighting program of instruction required under 30 CFR 75.1502. The operator will revise the program of instruction to include the hazards and evacuation procedures to be used for well intersections. All underground miners will be trained in this revised plan within 30 days of submittal. The procedure as specified in 30 CFR 48.3 for approval of proposed revisions to already approved training plans shall apply.

The petitioner asserts that the alternate method proposed will at all times guarantee no less than the same measure of protection afforded the miners under the mandatory standard.

Jessica Senk,

Director,

Office of Standards, Regulations, and Variances.

